

10782,488

200315625-1

REMARKS

This is a full and timely response to the non-final Official Action mailed February 15, 2006. Reconsideration of the application in light of the above amendments and the following remarks is respectfully requested.

Claim Status:

By the forgoing amendment, various claims have been amended. Additionally, new claims 35 and 36 have been added. No original claims have been cancelled. Thus, claims 1-36 are currently pending for further action.

Allowable Subject Matter:

The recent Office Action indicates the presence of allowable subject matter in claims 3-17, 19-30 and 32-34. Applicant wishes to thank the Examiner for this finding of allowable subject matter.

The recent Office Action also contains a statement of reasons for the allowability of these claims. Applicant agrees with the Examiner's conclusions regarding patentability, without necessarily agreeing with or acquiescing in the Examiner's reasoning. In particular, Applicant believes that the application is allowable because the prior art fails to teach, anticipate or render obvious the invention as claimed, independent of how the claims might be paraphrased.

10/782,488

200315625-1

Objections to Specification and Claims:

The recent Office Action expressed some difficulty with the term "diffractive" used in the specification and various claims. Accordingly, Applicant offers the following explanation.

The Office Action gives the following definition of diffraction: a "change in the directions and intensities of a group of waves after passing by an obstacle or through an aperture whose size is approximately the same as the wavelength of the waves." (Action of 2/15/06, p. 2). In a Diffractive Light Device, such as the mentioned in Applicant's specification, white light enters a cavity or gap between reflective plates. The light is then repeatedly reflected between the two reflective plates. This causes constructive and destructive interference at specific wavelengths. Eventually, light of a substantially single color emerges from the cavity. The color that is output by the device depends on the size of the gap between the plates as correlated to the wavelength of the desired output color. Thus, by controlling the spacing of the gap, the output color can be selected. If this is done dynamically, a color display device is created. Because the light passes in and out of the aperture of the DLD and emerges with a modified color (wavelength), the operation of the DLD is properly referred to as "diffractive." The term Diffractive Light Device (DLD) to describe this phenomenon and device has become a well-known, understood and accepted term in the art. Consequently, Applicant's use of the term "diffractive," as it is used in the art, should not be in any way confusing or unclear.

Given this explanation, there should be no further issue with Applicant's use of the term "diffractive" in the phrase "diffractive light device" (DLD). The Office Action did not expressly object to the specification, but any such objection would be considered overcome

10/782,488

200315625-1

by the foregoing explanation. The Office Action did object to various claims based on the use of the term "diffractive." These objections should now be reconsidered and withdrawn.

The Office Action also objected to claims 5, 8, 25, 30, 31 and 34 due to various minor informalities. These informalities have been corrected by the present paper. The amendments made in this regard are only to correct the informalities noted and do not, and are not intended to, narrow or change the scope of any claim so amended. Following entry of this amendment, the objection to the listed claims may be reconsidered and withdrawn.

Prior Art:

With regard to the prior art, claims 1, 2, 18 and 31 were rejected as anticipated under 35 U.S.C. § 102 by U.S. Patent No. 6,538,748 to Tucker et al. ("Tucker"). For at least the following reasons, this rejection is respectfully traversed.

Claim 1 recites:

A feedback-control circuit for color calibration of a diffraction light device, comprising:
at least one diffractive light device (DLD) having a gap distance defined by opposing plates;
at least one sensor configured to convert light modulated by said DLD device into a light signal indicative of said gap;
a controller configured to calculate a voltage correction value based on a difference between said gap as indicated by said light signal and a designer-specified gap value and being further configured to apply a corrected voltage corresponding to said voltage correction value to said DLD device.
(emphasis added).

In contrast, the Tucker system does not include any designer-specified gap value or a controller configured to calculate a voltage correction using such gap values as claimed. Rather, with reference to Tucker's Fig. 8, Tucker teaches a system in which a servo light signal from an optical device (360) is mixed with a reference laser (371). Beats between the

10/782,488

200315625-1

frequencies of the two light sources are then counted by a counter (374) and a voltage correction is accordingly determined by a controller (375). (See Tucker, col. 5, line 51 to col. 6, line 12).

In contrast, as explained in Applicant's specification, a gap value is the distance between opposing plates of the DLD. (Applicant's specification, paragraph 0011). The Tucker system does not include or use any quantified gap values. In particular, the Tucker system does not include a designer-specified gap value as claimed. Also, the Tucker system does not produce a voltage correction by comparing a designer-specified gap value to a measured gap value resulting from sensing light modulated by the DLD or optical device. The Tucker system does not include the claimed controller configured to calculate the voltage correction based on the difference between the gap indicated by a light signal and the designer-specified gap value stored in the circuit.

"A claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). See M.P.E.P. § 2131. For at least these reasons, the rejection of claims 1 and 2 based on Tucker should be reconsidered and withdrawn.

Similarly, independent claim 18 recites:

A method of calibrating a diffractive light device (DLD), comprising:
placing first and second opposing plates in a separated position defined by an actual gap distance;
directing light onto said DLD device to modulate that light;
converting modulated light to an assumed gap value;
comparing said assumed gap value to a designer-specified gap value; and
adjusting said assumed gap distance by a distance proportional to a difference between said assumed gap value and said designer-specified gap value.
(emphasis added).

10/782,488

200315625-1

In contrast, as demonstrated above, Tucker clearly fails to teach or suggest a method that includes "converting modulated light to an assumed gap value." The Tucker system never produces a value for the gap between opposing plates of the optical device. Tucker further fails to teach or suggest "comparing said assumed gap value to a designer-specified gap value." The Tucker system does not teach or suggest a designer-specified value for the gap between the opposing plates or a method that includes comparing such a specified gap value with an assumed gap value.

Again, "[a] claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). See M.P.E.P. § 2131. For at least these reasons, the rejection of claim 18 based on Tucker should be reconsidered and withdrawn.

Independent claim 31 recites:

A DLD system, comprising:
means for diffracting light based on an actual gap distance;
means for converting detected light values to assumed gap values;
means for comparing said assumed gap values to designer-specified gap values; and
means for adjusting said actual gap distance to minimize the distance between said assumed gap values and said designer-specified gap values.
(emphasis added).

As demonstrated above, Tucker clearly fails to teach or suggest a system that includes "means for converting modulated light to an assumed gap value." The Tucker system never produces a value for the gap between opposing plates of the optical device and includes no means for doing so. Tucker further fails to teach or suggest "means for comparing said assumed gap value to a designer-specified gap value." The Tucker system does not teach or

10/782,488

200315625-1

suggest a designer-specified value for the gap between the opposing plates or a means of comparing such a value to an assumed gap value as claimed.

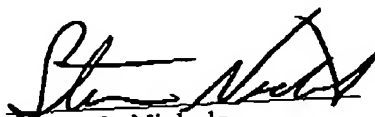
Again, "[a] claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). See M.P.E.P. § 2131. For at least these reasons, the rejection of claim 31 based on Tucker should be reconsidered and withdrawn.

Conclusion:

For the foregoing reasons, the present application is thought to be clearly in condition for allowance. Accordingly, favorable reconsideration of the application in light of these remarks is courteously solicited. If the Examiner has any comments or suggestions which could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the number listed below.

Respectfully submitted,

DATE: May 11, 2006


Steven L. Nichols
Registration No. 40,326

Steven L. Nichols, Esq.
Managing Partner, Utah Office
Rader Fishman & Grauer PLLC
River Park Corporate Center One
10653 S. River Front Parkway, Suite 150
South Jordan, Utah 84095
(801) 572-8066
(801) 572-7666 (fax)

